

## SEQUENCE LISTING

<110> Niewiarowski, Stefan  
 Marcinkiewicz, Cezary  
 Temple University, of the Commonwealth System of Higher Education

<120> EC-3, An Inhibitor of Alpha 4 Beta 1 and Alpha 4 Beta 7  
 Integrins

<130> 6056-236PC

<140>

<141>

<150> 60/055,825

<151> 1997-08-15

<150> 60/055,957

<151> 1997-08-18

<160> 20

<170> PatentIn Ver. 2.0

<210> 1

<211> 24

<212> PRT

<213> Echis carinatus

<220>

<221> VARIANT

<222> (11)

<223> K or T

<400> 1

Asn Ser Val His Pro Xaa Xaa Asp Pro Val Xaa Xaa Glu Pro Arg Glu

1

5

10

15

Gly Glu His Xaa Ile Ser Gly Pro

20

<210> 2

<211> 67

<212> PRT

<213> Echis carinatus

<400> 2

Asn Ser Val His Pro Cys Cys Asp Pro Val Lys Cys Glu Pro Arg Glu  
 1 5 10 15  
 Gly Glu His Cys Ile Ser Gly Pro Cys Cys Arg Asn Cys Tyr Phe Leu  
 20 25 30  
 Arg Ala Gly Thr Val Cys Lys Arg Ala Val Gly Asp Asp Val Asp Asp  
 35 40 45  
 Tyr Cys Ser Gly Ile Thr Pro Asp Cys Pro Arg Asn Arg Tyr Lys Gly  
 50 55 60  
 Lys Glu Asp  
 65

<210> 3  
 <211> 67  
 <212> PRT  
 <213> Echis carinatus

<400> 3  
 Asn Ser Val His Pro Cys Cys Asp Pro Val Lys Cys Glu Pro Arg Glu  
 1 5 10 15  
 Gly Glu His Cys Ile Ser Gly Pro Cys Cys Arg Asn Cys Lys Phe Leu  
 20 25 30  
 Asn Ala Gly Thr Ile Cys Lys Arg Ala Met Leu Asp Gly Leu Asn Asp  
 35 40 45  
 Tyr Cys Thr Gly Ile Ser Thr Asp Cys Pro Arg Asn Arg Tyr Lys Gly  
 50 55 60  
 Lys Glu Asp  
 65

<210> 4  
 <211> 11  
 <212> PRT  
 <213> Echis carinatus

<400> 4  
 Lys Arg Ala Arg Gly Asp Asp Met Asp Asp Tyr  
 1 5 10

<210> 5  
 <211> 11  
 <212> PRT  
 <213> Echis carinatus

<400> 5  
 Lys Arg Ala Val Gly Asp Asp Val Asp Asp Tyr  
 1 5 10

<210> 6  
 <211> 11  
 <212> PRT  
 <213> Echis carinatus

<400> 6  
 Lys Arg Ala Met Leu Asp Gly Leu Asn Asp Tyr  
 1 5 10

<210> 7  
 <211> 64  
 <212> PRT  
 <213> Vipera lebetina

<400> 7  
 Asn Ser Gly Asn Pro Cys Cys Asp Pro Val Thr Cys Gln Pro Arg Arg  
 1 5 10 15

Gly Glu His Cys Val Ser Gly Lys Cys Cys Arg Asn Cys Lys Phe Leu  
 20 25 30

Arg Ala Gly Thr Val Cys Lys Arg Ala Val Gly Asp Asp Met Asp Asp  
 35 40 45

Tyr Cys Thr Gly Ile Ser Ser Asp Cys Pro Arg Asn Pro Tyr Lys Asp  
 50 55 60

<210> 8  
 <211> 49  
 <212> PRT  
 <213> Eristocophis macmahonii

<400> 8

Gln Glu Glu Pro Cys Ala Thr Gly Pro Cys Cys Arg Arg Cys Lys Phe  
1 5 10 15

Lys Arg Ala Gly Lys Val Cys Arg Val Ala Arg Gly Asp Trp Asn Asp  
20 25 30

Asp Tyr Cys Thr Gly Lys Ser Cys Asp Cys Pro Arg Asn Pro Trp Asn  
35 40 45

Gly

<210> 9

<211> 49

<212> PRT

<213> Echis carinatus

<400> 9

Glu Cys Glu Ser Gly Pro Cys Cys Arg Asn Cys Lys Phe Leu Lys Glu  
1 5 10 15

Gly Thr Ile Cys Lys Arg Ala Arg Gly Asp Asp Met Asp Asp Tyr Cys  
20 25 30

Asn Gly Lys Thr Cys Asp Cys Pro Arg Asn Pro His Lys Gly Pro Ala  
35 40 45

Thr

<210> 10

<211> 70

<212> PRT

<213> Trimeresurus flavoviridis

<400> 10

Gly Glu Glu Cys Asp Cys Gly Ser Pro Ser Asn Pro Cys Cys Asp Ala  
1 5 10 15

Ala Thr Cys Lys Leu Arg Pro Gly Ala Gln Cys Ala Asp Gly Leu Cys  
20 25 30

Cys Asp Gln Cys Arg Phe Lys Lys Lys Thr Gly Ile Cys Arg Ile Ala  
35 40 45

Arg Gly Asp Phe Pro Asp Asp Arg Cys Thr Gly Leu Ser Asn Asp Cys

50 55 60

Pro Arg Trp Asn Asp Leu  
65 70

<210> 11  
<211> 68  
<212> PRT  
<213> Calloselasma rhodostoma

<400> 11  
Gly Lys Glu Cys Asp Cys Ser Ser Pro Glu Asn Pro Cys Cys Asp Asp  
1 5 10 15  
Ala Thr Cys Lys Leu Arg Pro Gly Ala Gln Cys Gly Glu Gly Leu Cys  
20 25 30  
Cys Glu Gln Cys Lys Phe Ser Arg Ala Gly Lys Ile Cys Arg Ile Pro  
35 40 45  
Arg Gly Asp Met Pro Asp Asp Arg Cys Thr Gly Gln Ser Ala Asp Cys  
50 55 60

Pro Arg Tyr His  
65

<210> 12  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
peptide

<400> 12  
Gly Arg Gly Asp Ser Pro  
1 5

<210> 13  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide

<400> 13

Gly Arg Gly Glu Ser Pro

1

5

<210> 14

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide

<400> 14

Met Leu Asp Gly

1

<210> 15

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide

<400> 15

Arg Gly Asp Ser

1

<210> 16

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide

<220>

<221> DISULFID

<222> (1) .. (13)

&lt;400&gt; 16

Cys Lys Arg Ala Met Leu Asp Gly Leu Asn Asp Tyr Cys

1

5

10

&lt;210&gt; 17

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: synthetic  
peptide

&lt;220&gt;

&lt;221&gt; DISULFID

&lt;222&gt; (1) .. (13)

&lt;400&gt; 17

Cys Lys Arg Ala Met Leu Ala Gly Leu Asn Asp Tyr Cys

1

5

10

&lt;210&gt; 18

&lt;211&gt; 5

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: synthetic  
peptide

&lt;400&gt; 18

Met Leu Asp Gly Leu

1

5

&lt;210&gt; 19

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Echis carinatus

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (33)

&lt;223&gt; R or N

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (37)

&lt;223&gt; V or I

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (64)

&lt;223&gt; G or D

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (66)

&lt;223&gt; E or D

&lt;400&gt; 19

Asn Ser Val His Pro Cys Cys Asp Pro Val Lys Cys Glu Pro Arg Glu

1

5

10

15

Gly Glu His Cys Ile Ser Gly Pro Cys Cys Arg Asn Cys Tyr Phe Leu

20

25

30

Xaa Ala Gly Thr Xaa Cys Lys Arg Ala Val Gly Asp Asp Val Asp Asp

35

40

45

Tyr Cys Ser Gly Ile Thr Pro Asp Cys Pro Arg Asn Arg Tyr Lys Xaa

50

55

60

Lys Xaa Asp

65

&lt;210&gt; 20

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Echis carinatus

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (11)

&lt;223&gt; K or T

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (40)

&lt;223&gt; R or K

&lt;220&gt;



&lt;221&gt; VARIANT

&lt;222&gt; (55)

&lt;223&gt; T or S

&lt;400&gt; 20

Asn Ser Val His Pro Cys Cys Asp Pro Val Xaa Cys Glu Pro Arg Glu

1

5

10

15

Gly Glu His Cys Ile Ser Gly Pro Cys Cys Arg Asn Cys Lys Phe Leu

20

25

30

Asn Ala Gly Thr Ile Cys Lys Xaa Ala Met Leu Asp Gly Leu Asn Asp

35

40

45

Tyr Cys Thr Gly Ile Ser Xaa Asp Cys Pro Arg Asn Arg Tyr Lys Gly

50

55

60

Lys Glu Asp

65